CHILLX

7.5 Ton & 10 Ton

Commercial Multi-Position Hydronic Air Handler

Product Specifications

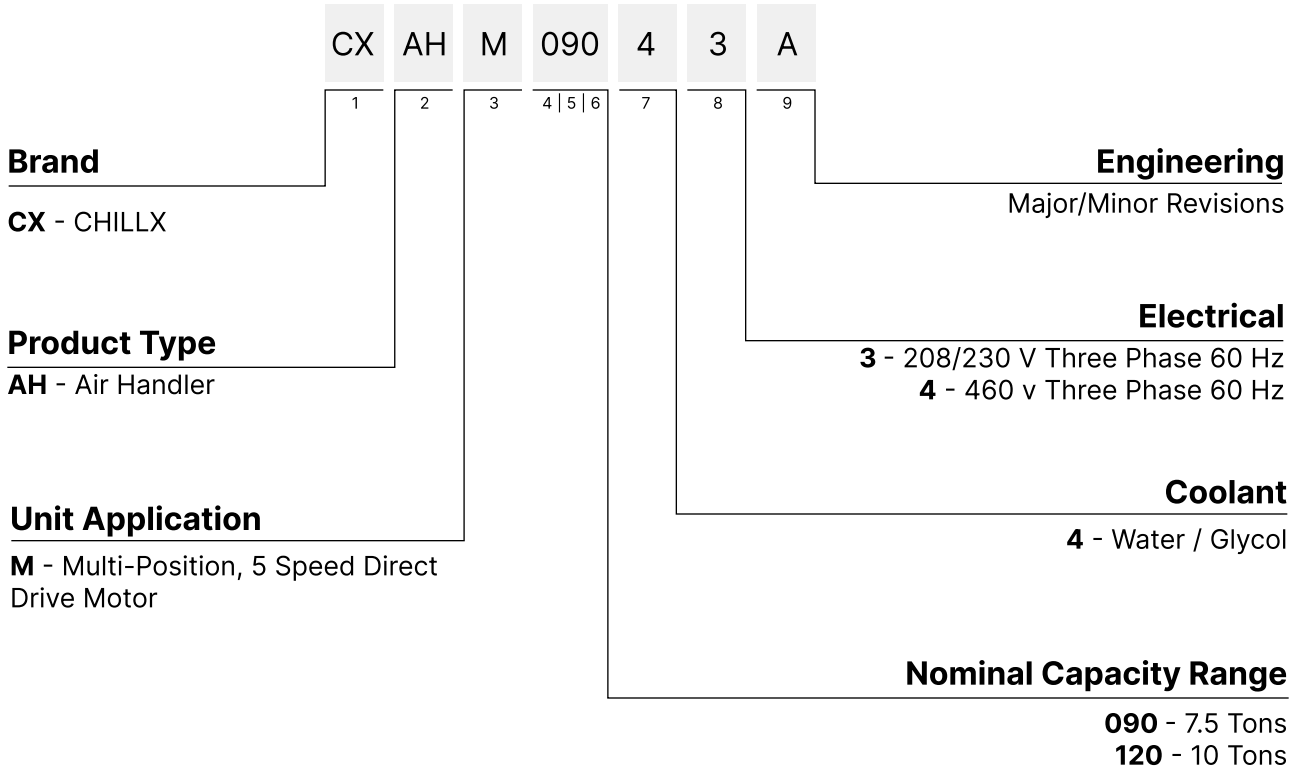
Models

CXAHM09043A
CXAHM09044A
CXAHM12043A
CXAHM12044A

Models

	Capacity	Electrical	Coolant
CXAHM09043A	**7.5 Ton**	208/230-60-3	Water / Glycol
CXAHM09044A	**7.5 Ton**	460-60-3	
CXAHM12043A	**10Ton**	208/230-60-3	Water / Glycol
CXAHM12044A	**10Ton**	460-60-3	

Nomenclature



Specifications

	7.5 Ton		10 Ton	
	CXAHM09043A	CXAHM09044A	CXAHM12043A	CXAHM12044A
TOTAL CAPACITIES				
Nominal Cooling (Tons)	7.5	7.5	10	10
Heating (kW) *Optional	15, 20, 30	15, 20, 30	15, 20, 30	15, 20, 30
ELECTRICAL DATA				
Voltage-Hz-Phase	208/230-60-3	460-60-3	208/230-60-3	460-60-3
Voltage Range	197 - 253	414-506	197 - 253	414-506
FLA	13.8	4.6	13.8	4.6
Minimum Circuit Ampacity	15.5/15.5	5.2	15.5/15.5	5.2
BLOWER MOTOR				
Type Direct-Drive	Direct-Drive	Direct-Drive	Direct-Drive	Direct-Drive
Horse Power	1	1	1	1
Voltage-Hz-Phase	208/230-60-3	460-60-3	208/230-60-3	460-60-3
FLA/ LRA	6.9/47.7	2.3/23.9	6.9/47.7	2.3/23.9
BLOWER & CONTROLS				
Wheel Dia. & Width (Qty.)	11 × 10 (2)	11 × 10 (2)	11 × 10 (2)	11 × 10 (2)
Nominal Airflow (Ft./Min.)	3,000	3,000	4,000	4,000
Transformer	Standard	Standard	Standard	Standard
Blower Relay	Standard	Standard	Standard	Standard
FILTERS, COIL & COOLANT				
Filter Frame Dim.	36 ¼” x 36 ¼”	36 ¼” x 36 ¼”	36 ¼” x 36 ¼”	36 ¼” x 36 ¼”
Filter (roll media)	AAF Flanders*	AAF Flanders*	AAF Flanders*	AAF Flanders*
Coil Area (sq. ft.)	9	9	9	9
FPI - Rows	12-3	12-3	12-3	12-3
Coolant	Water/Glycol	Water/Glycol	Water/Glycol	Water/Glycol
In / Out Connection	1” FNPT (2)	1” FNPT (2)	1” FNPT (2)	1” FNPT (2)
Condensate Drain	3/4 FPT	3/4 FPT	3/4 FPT	3/4 FPT
SHIP WEIGHT (LBS)	430	430	430	430

*The Recommended Filter: AAF Flanders Hammock Roll Media - Flanders Precisionaire Spun Glass Hammock Roll Media - SKU HR36240 - (36” x 36” x 1”)

Airflow Data - 7.5 Ton

*UP-FLOW				
SPEED TAP	SPEED TAP	SCFM	RPM	SINGLE FAN BHP
T1	0.1	1,941	536	0.09
	0.2	4,794	587	0.10
	0.3	4,627	638	0.11
	0.4	4,446	687	0.12
	0.5	4,256	734	0.13
	0.6	4,078	781	0.14
	0.7			
	0.8			
T2	0.1	3,079	727	0.28
	0.2	2,985	764	0.29
	0.3	2,877	801	0.30
	0.4	2,761	838	0.32
	0.5	2,642	875	0.33
	0.6	2,525	912	0.35
	0.7	2,406	948	0.36
	0.8	2,287	983	0.37
T3	0.1	3,079	727	0.28
	0.2	2,985	764	0.29
	0.3	2,877	801	0.30
	0.4	2,761	838	0.32
	0.5	2,642	875	0.33
	0.6	2,525	912	0.35
	0.7	2,406	948	0.36
	0.8	2,287	983	0.37
T4	0.1	3,565	819	0.39
	0.2	3,500	845	0.40
	0.3	3,425	871	0.41
	0.4	3,348	899	0.43
	0.5	3,253	927	0.44
	0.6	3,153	958	0.46
	0.7	3,037	990	0.47
	0.8	2,917	1,025	0.49
T5	0.1	3,789	852	0.47
	0.2	3,717	881	0.49
	0.3	3,634	909	0.50
	0.4	3,548	938	0.52
	0.5	3,452	967	0.53
	0.6	3,350	997	0.55
	0.7	3,242	1,028	0.57
	0.8	3,128	1,060	0.58

*HORIZONTAL FLOW				
SPEED TAP	ESP (IN H20)	SCFM	RPM	SINGLE FAN BHP
T1	0.1	2,105	507	0.09
	0.2	1,898	563	0.10
	0.3	1,692	616	0.11
	0.4	1,494	668	0.12
	0.5	1,314	720	0.13
	0.6	1,140	770	0.13
	0.7			
	0.8			
T2	0.1	3,094	700	0.27
	0.2	3,034	746	0.28
	0.3	2,951	785	0.30
	0.4	2,854	820	0.31
	0.5	2,745	853	0.32
	0.6	2,621	885	0.34
	0.7	2,498	919	0.35
	0.8	02,357	953	0.36
T3	0.1	3,094	700	0.27
	0.2	3,034	746	0.28
	0.3	2,951	785	0.30
	0.4	2,854	820	0.31
	0.5	2,745	853	0.32
	0.6	2,621	885	0.34
	0.7	2,498	919	0.35
	0.8	02,357	953	0.36
T4	0.1	3,493	776	0.37
	0.2	3,410	814	0.39
	0.3	3,324	848	0.40
	0.4	3,224	878	0.42
	0.5	3,217	908	0.43
	0.6	3,015	937	0.45
	0.7	2,899	967	0.46
	0.8	2,773	998	0.47
T5	0.1	3,815	832	0.46
	0.2	3,734	866	0.48
	0.3	3,649	896	0.49
	0.4	3,562	924	0.51
	0.5	3,471	951	0.52
	0.6	3,373	978	0.54
	0.7	3,272	1,006	0.55
	0.8	3,162	1,035	0.57

*The above tables are for dry coils with filter in place. SCFM correction for wet coils results in 4%reduction.

NOTES:
- Any adjustment made to the blower should not cause the motor to draw more than the motors rated RLA.
- Applications that exceed the above could require a larger motor.

Airflow Data - 10 Ton

UP-FLOW				
SPEED TAP	ESP (IN H20)	SCFM	RPM	SINGLE FAN BHP
T1	0.1	2,525	622	0.17
	0.2	2,400	666	0.18
	0.3	2,269	710	0.19
	0.4	2,132	753	0.20
	0.5	1,984	794	0.21
	0.6	1,843	835	0.22
	0.7	1,706	875	0.24
	0.8	1,565	913	0.25
T2	0.1	4,012	890	0.56
	0.2	3,930	921	0.58
	0.3	3,841	950	0.59
	0.4	3,752	979	0.61
	0.5	3,658	1,007	0.63
	0.6	3,566	1,036	0.65
	0.7	3,463	1,064	0.66
	0.8	3,360	1,093	0.68
T3	0.1	4,012	890	0.56
	0.2	3,930	921	0.58
	0.3	3,841	950	0.59
	0.4	3,752	979	0.61
	0.5	3,658	1,007	0.63
	0.6	3,566	1,036	0.65
	0.7	3,463	1,064	0.66
	0.8	3,360	1,093	0.68
T4	0.1	4,482	973	0.74
	0.2	4,387	997	0.76
	0.3	4,299	1,021	0.78
	0.4	4,218	1,045	0.79
	0.5	4,141	1,069	0.81
	0.6	4,066	1,093	0.83
	0.7	3,992	1,117	0.85
	0.8	3,916	1,141	0.87
T5	0.1	4,588	1,003	0.81
	0.2	4,510	1,033	0.83
	0.3	4,441	1,060	0.86
	0.4	4,372	1,084	0.88
	0.5	4,301	1,106	0.89
	0.6	4,244	1,129	0.91
	0.7	4,179	1,151	0.93
	0.8	4,108	1,173	0.95

*HORIZONTAL FLOW				
SPEED TAP	ESP	SCFM	RPM	BHP
T1	0.1	2,851	619	0.17
	0.2	2,468	660	0.18
	0.3	2,340	703	0.19
	0.4	2,204	747	0.20
	0.5	2,061	791	0.21
	0.6	1,094	834	0.22
	0.7	1,740	876	0.24
	0.8	1,603	919	0.25
T2	0.1	4,134	881	0.55
	0.2	4,061	912	0.57
	0.3	3,989	940	0.59
	0.4	3,915	966	0.60
	0.5	3,835	991	0.62
	0.6	3,760	1,017	0.64
	0.7	3,671	1,043	0.65
	0.8	3,587	1,071	0.67
T3	0.1	4,134	881	0.55
	0.2	4,061	912	0.57
	0.3	3,989	940	0.59
	0.4	3,915	966	0.60
	0.5	3,835	991	0.62
	0.6	3,760	1,017	0.64
	0.7	3,671	1,043	0.65
	0.8	3,587	1,071	0.67
T4	0.1	4,530	955	0.73
	0.2	4,454	982	0.75
	0.3	4,377	1,008	0.77
	0.4	4,299	1,033	0.79
	0.5	4,219	1,057	0.80
	0.6	4,142	1,081	0.82
	0.7	4,062	1,104	0.84
	0.8	3,982	1,127	0.86
T5	0.1	4,649	976	0.79
	0.2	4,574	1,004	0.81
	0.3	4,495	1,030	0.83
	0.4	4,417	1,055	0.85
	0.5	4,339	1,079	0.87
	0.6	4,267	1,103	0.89
	0.7	4,193	1,126	0.91
	0.8	4,123	1,149	0.93

*The above tables are for dry coils with filter in place. SCFM correction for wet coils results in 4% reduction.

Temperature Range

7.5 TON

MODEL	HEAT KIT KW	CFM	SUPPLY VOLTAGE		
			208	240	480
CXAHM0904**	15	2,800	12	16	16
		2,900	12	16	16
		3,000	11	15	15
		3,100	11	15	15
		3,200	10	14	14
	20	2,800	16	22	22
		2,900	16	21	21
		3,000	16	21	21
		3,100	16	20	20
		3,200	15	20	20
	30	2,800	24	32	32
		2,900	23	31	31
		3,000	23	30	30
		3,100	21	29	29
		3,200	21	29	29

10 TON

MODEL	HEAT KIT KW	CFM	SUPPLY VOLTAGE		
			208	240	480
CXAHQ1204**	15	3,800	9	12	12
		3,900	9	12	12
		4,000	9	12	12
		4,100	9	12	12
		4,200	8	11	11
	20	3,800	12	17	17
		3,900	12	16	16
		4,000	12	16	16
		4,100	12	15	15
		4,200	11	15	15
	30	3,800	19	25	25
		3,900	18	24	24
		4,000	18	24	24
		4,100	17	23	23
		4,200	17	23	23

NOTES:
1. The above tables are calculated with both stages of electric heat engaged (2-stage heat systems). Divide the temperature rise from the table by 2 for 1st stage operation for systems using staged electric heat.
2. Temperature rise data are in Degrees Fahrenheit.

Electric Heater Kits

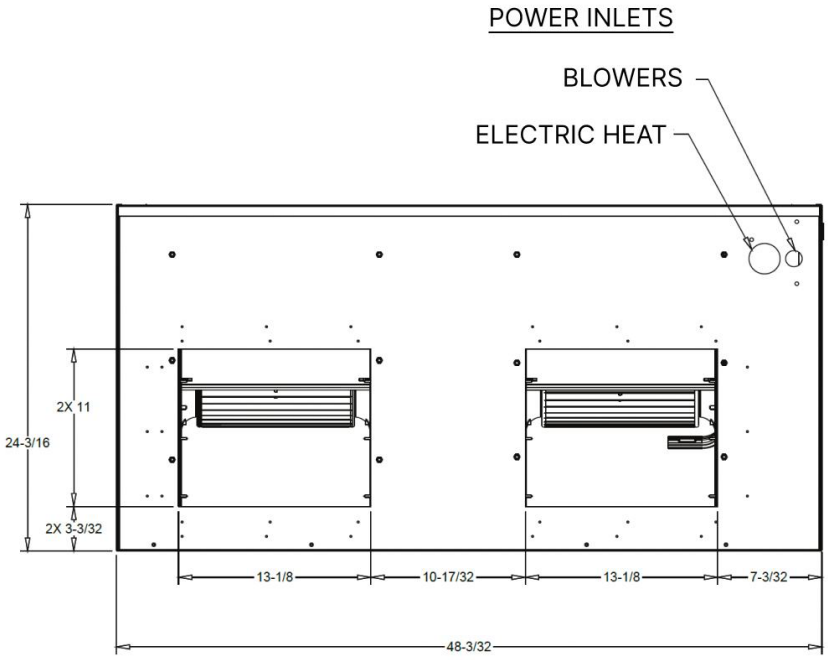
AIR HANDLER	AHKD MODEL	NOMINAL kW	ELECTRICAL DATA	STAGES	WEIGHT (LBS)	MCA[1]	MOP[2]
CXAHM0904** CXAHM1204**	None	N/A	208-230/3/60	N/A	N/A	15.5 / 15.5	20 / 20
	EHD15D3A	15	208-240/3/60	1	56	54.8-60.6	60 / 70
	EHD20D3A	20	208-240/3/60	2	59	67.3-75.0	70 / 80
	EHD30D3A	30	208-240/3/60	2	60	92.3-104	100 / 110
	None	N/A	460/3/60	N/A	N/A	5.2	15
	EHD15D4A	15	480/3/60	1	55	27.4	30
	EHD20D4A	20	480/3/60	2	57	34.6	35
	EHD30D4A	30	480/3/60	2	58	49.1	50

[1] Minimum Circuit Ampacity
[2] Maximum Overcurrent Protection

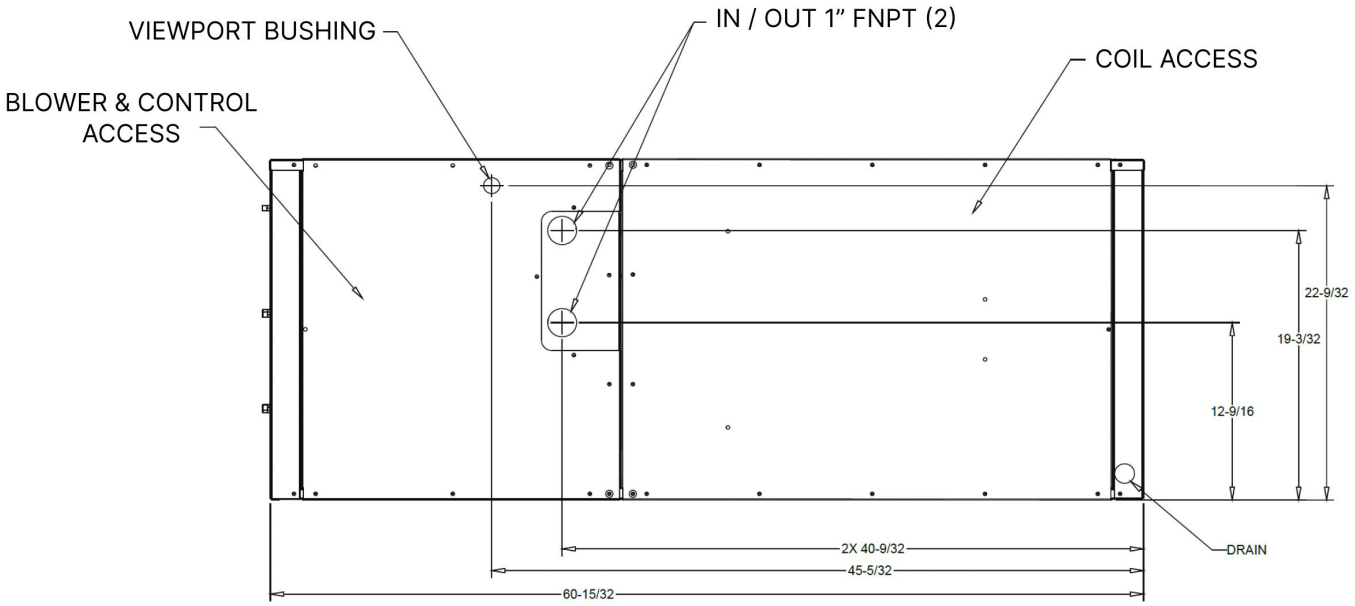
Notes:
• These air handlers do not have factory-installed electric heat. The above-listed kits are the ONLY heater kits that can be used with this commercial series. They are available for purchase as field-installed accessories.
• The electrical characteristics of the air handler, electric heater kits, and building power supply must be compatible.

Dimensions

Supply Side



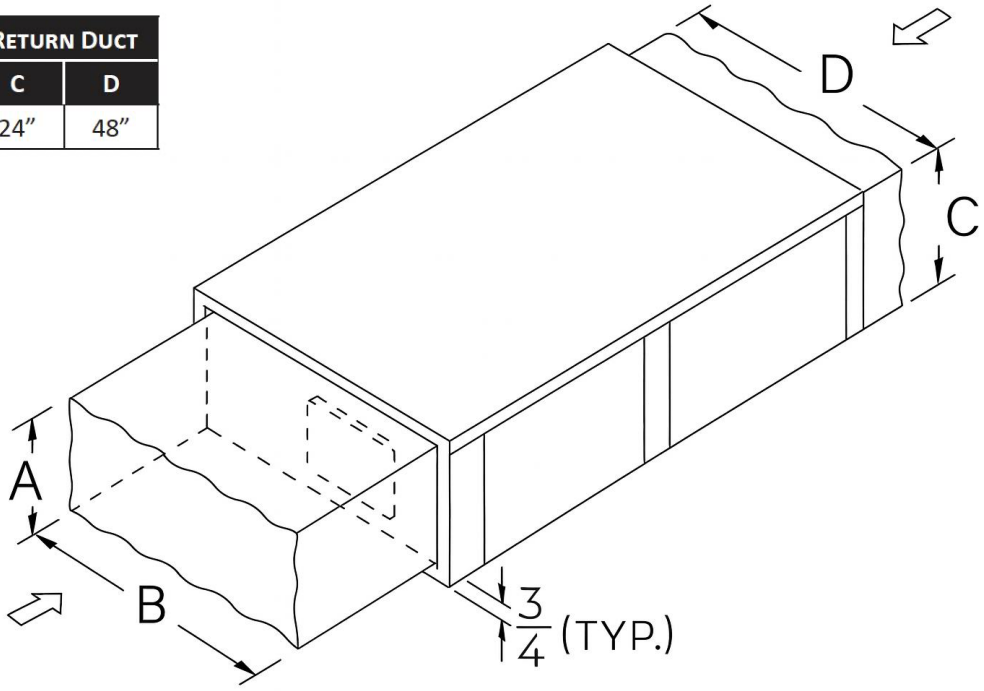
Front



Duct Dimensions

Duct Connection Sizing

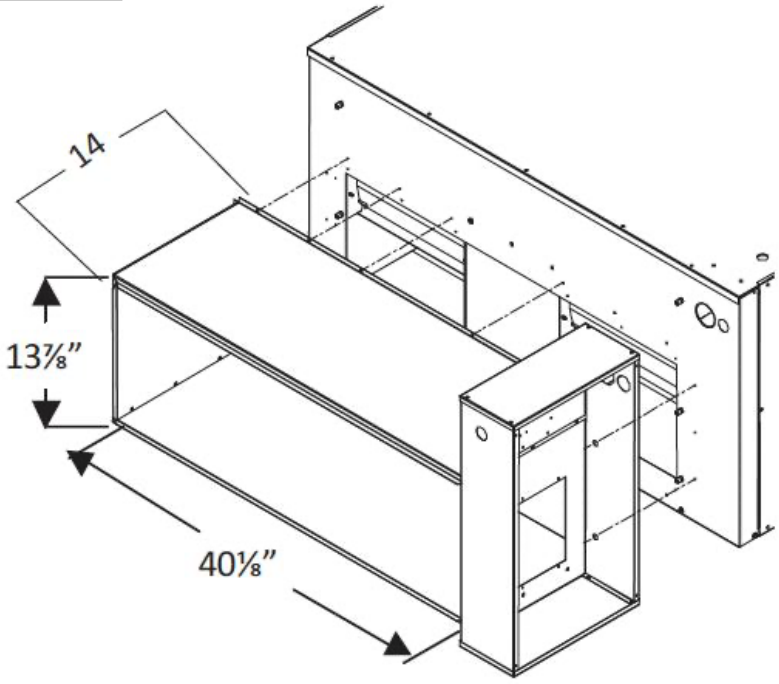
Supply Duct		Return Duct	
A	B	C	D
13⅛”	40”	24”	48”



Duct Connection Sizing with Electric Heaters

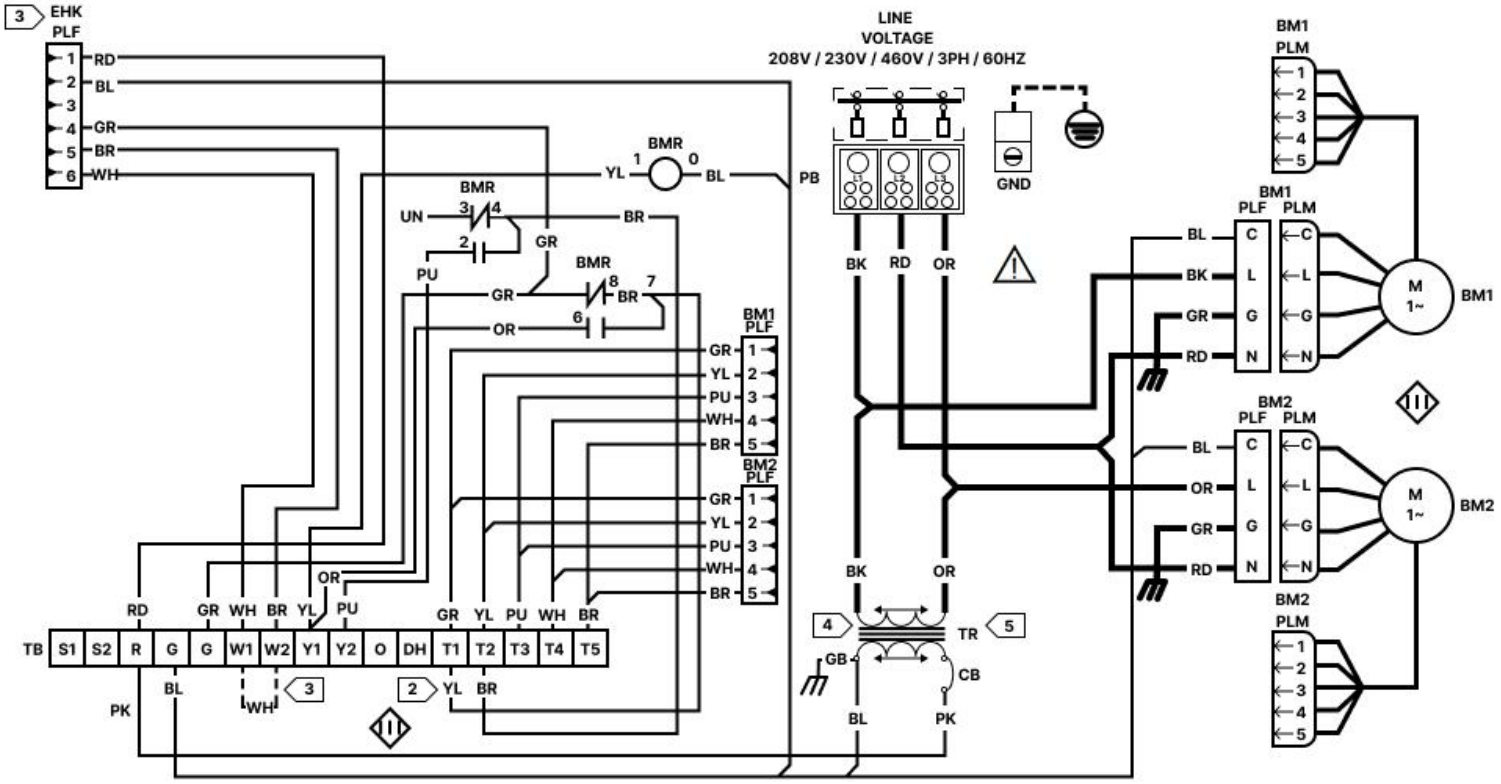
Minimum Supply and Return Duct Dimensions

- 15, 20, & 30 kW Heater Kits
- Supply opening is 13⅞” x 40⅛”



Wiring Diagram

> ⚠ **WARNING** — ***High Voltage:*** Disconnect all power before servicing or installing this unit. Multiple power sources may be present. Failure to do so may cause property damage, personal injury, or death. ⚡



WIRE CODE

BK	BLACK
BL	BLUE
BR	BROWN
GR	GREEN
OR	ORANGE
PK	PINK
PU	PURPLE
RD	RED
WH	WHITE
YL	YELLOW

FIELD WIRING

- HIGH VOLTAGE
- LOW VOLTAGE
- EARTH GROUND

FACTORYWIRING

- HIGH VOLTAGE
- LOW VOLTAGE
- OPTIONAL HIGH VOLTAGE
- OPTIONAL LOW VOLTAGE
- CHASSIS GROUND
- CLASS III

COMPONENT LEGEND

BC	BLOWER CONTACTOR
BM	BLOWER MOTOR
BMR	BLOWER MOTOR RELAY
CB	CIRCUIT BREAKER
EHK	ELECTRIC HEATER KIT
GND	EQUIPMENT GROUND
PB	POWER DISTRIBUTION BLOCK
PLF	FEMALE PLUG / CONNECTOR
PLM	MALE PLUG / CONNECTOR
TB	TERMINAL BLOCK
TR	TRANSFORMER
T1	LOW (Stage 1 Cool)
T2	HIGHER (Stage 2 Cool)
T3	HIGHEST SPEED
UN	UNUSED

NOTES

1. REPLACEMENT WIRE MUST BE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (AT LEAST 105° C). USE COPPER CONDUCTORS ONLY. USE N.E.C. CLASS 2 WIRE FOR ALL LOW VOLTAGE FIELD CONNECTIONS.

2 FAN ONLY AND LOW COOLING MODES (YELLOW WIRE) ARE WIRED TO TB-T1.
- HIGH COOLING, LOW HEAT, AND HIGH HEAT MODES (BROWN WIRE) ARE WIRED TO TB-T2.
- MOVE YELLOW AND BROWN WIRES AS NEEDED (TO TB-T1 THRU TB-T5) TO MEET INSTALLATION AIRFLOW REQUIREMENTS. SEE AIRFLOW DATA IN PRODUCT SPECIFICATIONS DOCUMENT PAGE 3, 4.

3 FOR OPTIONAL ACCESSORY WIRING DETAILS PLEASE CONTACT SUPPORT@CHILLXCHILLERS.COM

4 **FOR 208V SUPPLY POWER, MOVE ORANGE WIRE FROM 240V TAP TO THE 208V TAP.**

5 LOW VOLTAGE TRANSFORMER RATED 24VAC OUTPUT 75VA @ 3.125

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